



A.D. 1862, *3rd OCTOBER.* N^o 2669.

S P E C I F I C A T I O N

OF

JOHN HARROP & JAMES WADSWORTH.

DEODORIZING REFUSE AND FECAL
MATTERS FOR MANURE.

L O N D O N :

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1863.



A.D. 1862, 3rd OCTOBER. N° 2669.

Deodorizing Refuse and Fecal Matters for Manure.

(This Invention received Provisional Protection only.)

PROVISIONAL SPECIFICATION left by John Harrop and James Wadsworth at the Office of the Commissioners of Patents, with their Petition, on the 3rd October 1862.

We, JOHN HARROP, of Manchester, in the County of Lancaster, Analytical
5 Chemist; and JAMES WADSWORTH, of Salford, in the same County, Machinist,
do hereby declare the nature of the said Invention for "IMPROVEMENTS IN
DEODORIZING REFUSE, ORGANIC, FECAL, AND URINOUS MATTERS, AND IN A
METHOD OF UTILIZING COAL AND OTHER ASHES, AND IN MACHINERY OR APPA-
RATUS CONNECTED THEREWITH FOR PRODUCING A PORTABLE MANURE THEREFROM," to
10 be as follows:—

Our Invention consists, first, in the use and application of chloride of
sodium (muriate of soda or common salt) either dry, crystalized, or in a
solution as a disinfectant or deodorizer; also the admixture with chloride of
sodium (muriate of soda or common salt) either dry, crystalized, or in solution
15 of any resinous, sooty, earthy, vegetable, metallic, or alkaline matters (except
oleaginous matters) as a disinfectant or deodorizer for the purpose of
deodorizing and preventing the generation and escape of noxious effluvia in
refuse, organic, fecal, and urinous matters, and by so doing to remove or
prevent the exhalation of the noxious effluvia.

20 Secondly, our Invention consists in converting such refuse, organic, fecal,
and urinous matters into a concentrated portable manure, as follows:—In

Harrop & Wadsworth's Impts. in Deodorizing Refuse and Fecal Matters.

order to prevent the escape of the free ammonia from the excremental, fecal, and urinous matters in the process of manufacture, we neutralize or combine the said free ammonia with the hydro-chloride acid (muriatic acid or spirit of salt) of commerce; and, further, by the process of evaporation in stills, pans, or boilers by the aid of steam, and hot and cold currents of air, 5 and the application of a steam pump for the purpose of exhausting rapidly the generated steam or vapour produced by evaporation of the fecal, urinous matters in the stills, pans, or boilers. We also compound or mix with such produce the common ashes and cinders of coal, wood, peat, or other fuel collected from dwelling-houses, warehouses, offices, works, and other sources, 10 by mechanical means, from such ashes those elements which are useful and necessary in the mixing and compounding of the manure.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1863.